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फुटवियर उद्योग के लिए  
हाथ के उपकरण — विशिष्टि

भाग 5 सीधा हैकिंग चाकू

(पहला पुनरीक्षण)

Hand Tools for Footwear Industry —  
Specification

Part 5 Straight Hacking Knife

(First Revision)

ICS 61.060

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## FOREWORD

This Indian Standard (Part 5) (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Footwear Sectional Committee had been approved by the Chemical Division Council.

The straight hacking knife is used for trimming of extra upper leather to make it of uniform shape. It is also used for rounding of sole leather to give it a regular shape.

This standard was first published in 1972. This revision has been taken up in order to bring out the standard in latest style and format of the Indian Standards. The relevant clauses have been added and the references have been updated.

This Indian Standard is published in several parts. The other parts in this series are:

- Part 1 Upper clicking knife
- Part 2 Bottom cutting knife (Rampi)
- Part 3 Designers' knife
- Part 4 Half round knife

The composition of the Committee responsible for the formulation of this standard is given in [Annex C](#).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***HAND TOOLS FOR FOOTWEAR INDUSTRY—SPECIFICATION  
PART 5 STRAIGHT HACKING KNIFE***( First Revision )***1 SCOPE**

This standard prescribes the requirements, method of sampling and tests for straight hacking knife used in footwear industry for cutting leather.

**2 REFERENCES**

The standards given below contain provisions which, through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of these standards:

<i>IS No.</i>	<i>Title</i>
IS 347 : 2023	Varnish shellac for general purposes — Specification ( <i>second revision</i> )
IS 579 : 2017	Vegetable tanned sole leather — Specification ( <i>fourth revision</i> )
IS 620 : 1985	Specification for wooden tool handles general requirements ( <i>fourth revision</i> )
IS 1501 (Part 1) : 2020/ISO 6507-1 : 2018	Metallic materials — Vickers hardness test: Part 1 Test method ( <i>fifth revision</i> )
IS 2050 : 1991	Glossary of terms relating to footwear ( <i>first revision</i> )
IS 4905 : 2015/ ISO 24153 : 2009	Random sampling and randomization procedures ( <i>first revision</i> )

**3 TERMINOLOGY**

For the purpose of this standard, the definition given in IS 2050 shall apply.

**4 REQUIREMENTS****4.1 Materials****4.1.1 Blades**

The knife blade shall be made from steel conforming to the performance test given in [4.5.1](#), [4.5.2](#) and [4.5.3](#).

**4.1.2 Handle**

Handle of the knife shall be made from wood conforming generally to the requirements of Class V of IS 620.

**4.1.3 Washers**

The washer shall be of mild steel, 16 mm diameter and 0.8 mm thickness.

**4.1.4 Rivets**

The rivets shall be of mild steel, flat head 6 mm diameter and 16 mm long.

**4.2 Design and Dimensions**

A typical design with recommendatory dimensions is given in [Fig. 1](#).

**4.3 Hardness**

The hardness of the finished steel blades of the knife, measured as near to the cutting edge as possible shall be within 625 HV to 725 HV when tested according to IS 1501 (Part 1).

**4.4 General Requirements and Finish**

**4.4.1** The blades shall be suitably hardened and tempered. The blades shall be free from cracks, seams, pits, burns and other visible defects. They shall be smoothly ground and capable of being sharpened by means of an oil stone to a fine cutting edge.

**4.4.2** The tang shall be well drawn and securely fitted to the handle with rivets.

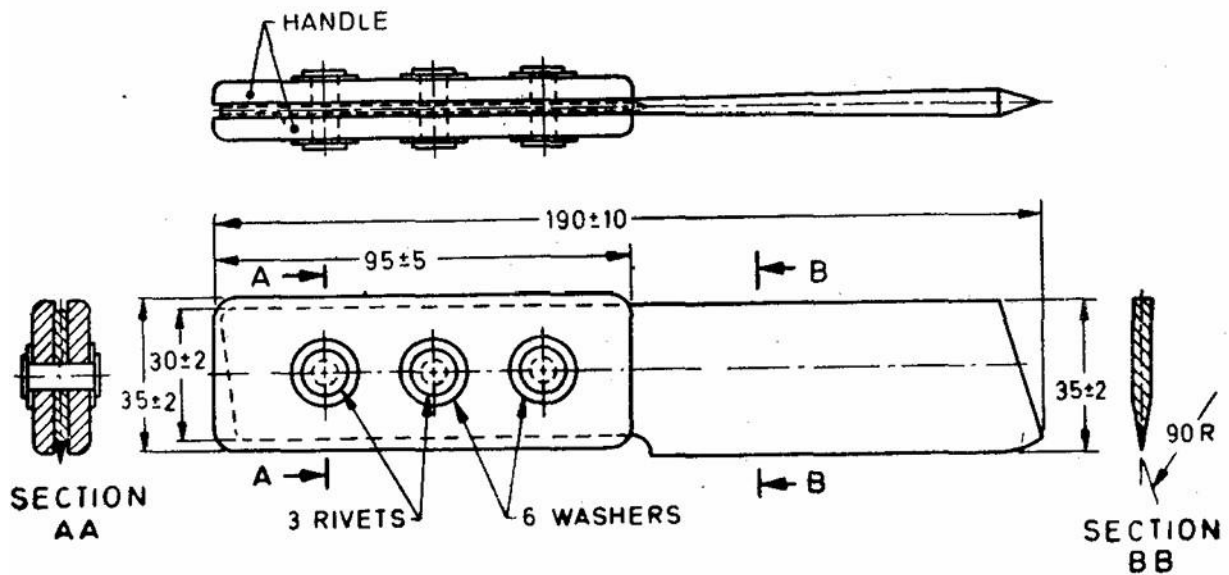
**4.4.3** The handle shall be evenly and smoothly finished and shall be coated with shellac varnish (*see* IS 347).

**4.5 Performance Requirements**

**4.5.1** The knife when suitably sharpened and subjected to a practical cutting test on butt portion of vegetable tanned sole leather (*see* IS 579), approximately 5 mm thick, shall cut easily and shall give a clean-cut edge. The cutting edge shall fully retain its keenness and shall show no sign of distortion or any other defects on completion of the test.

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All dimensions in millimetres.  
FIG. 1 STRAIGHT HACKING KNIFE

4.5.2 The blades of the knife shall not show any sign of blunting, cracking, permanent set or loosening or tendency to fold from the handle being struck sharp blows on one of the hard timbers given in [Annex A](#) from a height of 250 mm with the cutting edge facing downwards.

4.5.3 The blades of each knife shall be struck four hard blows across the edge of any of the hard timbers given in [Annex A](#) along its flat surface. The blades shall show no sign of damage or distortion during or after the test.

## 5 PACKING AND MARKING

### 5.1 Packing

The blades of the knife shall be wrapped in greased paper and securely tied. The wrapped knives shall then be packed as agreed to between the purchaser and the supplier.

### 5.2 Marking

5.2.1 Each blade of the knife or the package or both

shall be marked legibly with the following particulars:

- a) Name of the manufacturer or trade-mark, if any; and
- b) Date and year of manufacture.

### 5.2.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

## 6 SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

The scale of sampling and criteria for conformity shall be as prescribed in [Annex B](#).

## ANNEX A

(Clauses [4.5.2](#) and [4.5.3](#))

## HARD TIMBERS

**A-1** The following timbers may be used for testing the performance of the knives:

<i>Sl No.</i>	<i>Trade Name</i>	<i>Boranical Name</i>
(1)	(2)	(3)
i)	Kusum	<i>Schleicher oleosa</i> Merr.
ii)	Babul	<i>Acaicia nilotica</i> (Linn.) Del. Syn <i>Acacia arbica</i> <i>Linn, Fam. Leguminosae</i>
iii)	Sissoo	<i>Dalbergia sissoo</i> Roxb.
iv)	Sal	<i>Shorea robusta</i> Gaertn.f.
v)	Hopea	<i>Hopea</i> sp.
vi)	Mesua	<i>Mesua Ferres</i>

**ANNEX B**

(Clause 6)

**SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY**

**B-1 SCALE OF SAMPLING**

**B-1.1 Lot**

In a consignment all the knives of the same shape and dimensions shall be grouped together to constitute a lot.

**B-1.2** Each lot shall be tested separately for determining its conformity to the requirements of this specification.

**B-1.3** The number of knives to be selected in the sample depends on the size of the lot and shall be in accordance with col (2) and col (3) of [Table 1](#).

**B-1.4** These sample knives shall be selected at random from the lot. For random selection

procedures, IS 4905 may be referred.

**B-2 CRITERIA FOR CONFORMITY**

**B-2.1** All the selected knives shall be examined for material, construction, dimensions and finish and shall also be tested for performance requirements given in [4.5](#). A knife failing in any one of the above requirements shall be taken as a defective. The number of defectives shall not exceed the permissible number given in col (4) of [Table 1](#) if the lot is to be accepted as satisfactory.

**B-2.2** Two knives, if the lot size is 100 and below, shall be tested for hardness of steel blade. There shall be no failure if the lot is to be accepted under this clause.

**Table 1 Scale of Sampling and Permissible Number of Defectives**

(Clauses [B-1.3](#) and [B-2.1](#))

Sl No.	Lot Size	Sample Size	Permissible No. of Defectives
(1)	(2)	(3)	(4)
i)	Up to 25	5	0
ii)	26 to 50	8	0
iii)	51 and above	13	1

## ANNEX C

*(Foreword)*

## COMMITTEE COMPOSITION

Footwear Sectional Committee, CHD 19

<i>Organization</i>	<i>Representative(s)</i>
In Personal Capacity ( <i>Flat F1, Bhoopathy Apartment, 10, Ethiraj Street, Palipattu, Chennai – 600113</i> )	DR B. N. DAS ( <b>Chairperson</b> )
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Bata India Limited, Kolkata	SHRI HITESH KAKKAR SHRI GOVINDARAJU ( <i>Alternate</i> )
CSIR - Central Leather Research Institute, Chennai	DR R. MOHAN DR MAHESH KUMAR J. ( <i>Alternate</i> )
Central Footwear Training Institute, Chennai	SHRI K. MURALI
Central Reserve Police Force, New Delhi	SHRI SANJEEV KUMAR SINGH SHRI D. P. UPADHYAY ( <i>Alternate</i> )
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Council For Leather Exports, Chennai	SHRI A. FAYAZ AHMAD SHRI D. GOKULAKRISHNAN ( <i>Alternate</i> )
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Footwear Design and Development Institute, Noida	SHRI SHAILENDAR SAXENA SHRI SAROJ KUMAR PANDA ( <i>Alternate</i> )
Indian Footwear Components Manufacturers Association, Noida	SHRI SHARAD KANT VERMA SHRI SANJAY GUPTA ( <i>Alternate</i> )
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Liberty Shoes Limited (P.U. Division), Karnal	SHRI S. S. LAHIRI SHRI ADESH GUPTA ( <i>Alternate</i> )
MB Rubber Private Limited, Delhi	SHRI VIPAN MEHTA
MSME Technology Development Centre (PPDC), Meerut	SHRI ADITYA PRAKASH SHARMA SHRI TULARAM BHARTI ( <i>Alternate</i> )
Pinza Footwear, New Delhi	SHRI PREM MEHANI
Prolific Engineers, Noida	SHRI G. P. KEDIA
SGS India Private Limited, Chennai	SHRI P. VENKATESAN SHRI K. PACHAIYAPPAN ( <i>Alternate</i> )
Top Lasts, Agra	SHRI ANURAG SHARMA SHRI DEEPAK MANCHANDA ( <i>Alternate</i> )

**IS 6053 (Part 5) : 2024**

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BIS Directorate General	SHRI AJAY KUMAR LAL, SCIENTIST 'F'/SENIOR DIRECTOR AND HEAD (CHEMICAL) [REPRESENTING DIRECTOR GENERAL ( <i>Ex-officio</i> )]
	<i>Member Secretary</i> MS PREETI PRABHA SCIENTIST 'D'/JOINT DIRECTOR (CHEMICAL), BIS





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Amend No.	Date of Issue	Text Affected

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